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EXAMINER

SELLERS, ROBERT E

ART UNIT PAPER NUMBER

1712

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,044

Applicant(s)

DAMMANN ET AL.

Examiner

Robert Sellers

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 12, 13, 29-42 and 45-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-28, 43 and 44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 701.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claims 12, 13, 29-36 and 45-53 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Claims 37-42 are withdrawn as being directed to the non-elected species of the presence of the free-radical generator of claims 37-39 and the presence of the cationic photoinitiator of claims 39-42.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-5 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. There is no antecedent basis in claim 1 for the β -dicarbonyl donor of claims 3 and 5 as well as the multifunctional acrylate Michael acceptor of claim 4. These reactants are defined in claim 2.
2. There is no antecedent basis in claim 13 for the base of claims 16 and 17. Claim 15 denotes the base. The improper Markush language of "chosen from the group consisting of" in claim 17, line 2 should be amended to the acceptable "selected from the group consisting of."
3. There is no antecedent basis in claim 18 of the alkoxide of claim 18. Claim 16 defines a group [sic] I alkoxides, quaternary alkoxides and alkoxide bases. It is unclear which of the alkoxides that of claim 18 is referring to.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10, 15, 43 and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent No. 11-92546 (Japanese '546).

2. Japanese '546 (abstracts and translation, page 2, paragraph 10, lines 4-6 and page 4, lines 1-2) is directed to a composition comprising the uncrosslinked Michael reaction product of a polyacrylate and an amino compound blended with an epoxy group-containing compound such as cyclohexene oxide (Chemical abstracts registry no. 286-20-4) or vinyl cyclohexene oxide (Chemical abstracts registry no. 106-86-5).

The claimed uncrosslinked Michael addition polyacrylate reaction product encompasses the reaction of the polyacrylate with an amino compound found in the Japanese patent.

More favorable consideration would be given if the limitations of claim 2 are inserted into independent claim 1.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 14-28, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidt et al. Patent No. 5,667,901 and Tominaga et al. Patent No. 5,218,018.

3. Heidt et al. (col. 4, lines 24-55) discloses an uncrosslinked Michael addition product of an acetoacetate such as t-butyl acetoacetate (col. 11, Example 1) and one of the elected species of trimethylolpropane triacrylate prepared in the presence of the elected species of diazabicyclo[5.4.0]undec-7-ene (col. 5, line 39) employed as a crosslinker in a thermosetting coating composition (col. 3, lines 56-58) comprising a hydroxyl-functional acrylic resin or polyester (col. 5, lines 41-47 and 56-58 and col. 6, lines 33-45) the Michael addition product and other crosslinkers such as epoxys (col. 7, lines 16-19).

4. The claimed cycloaliphatic epoxide is not recited. Tominaga et al. (col. 2, lines 1-7) sets forth a thermosetting coating composition comprising a hydroxyl group-containing resin such as hydroxyl group-containing acrylic resins or polyesters (col. 3, lines 16-20, 24-30 and 38-39) and an alicyclic polyepoxide curing agent (col. 6, lines 49-68). The claimed uncrosslinked Michael addition polyacrylate reaction product is not recited.

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5. It would have been obvious to incorporate the cycloaliphatic epoxide of Tominaga et al. as the other epoxy crosslinking agent of Heidt et al. in order to impart "excellent decorative properties as well as superior physical and chemical properties without any defects such as bubbling and shrink of the coating film (col. 2, lines 41-51)" as well as improving the flexing and corrosion resistance (col. 17, lines 44-48) and to take advantage of the mitigation of a viscosity increase or gelling during curing by using a cycloaliphatic epoxide instead of the bisphenol/epichlorohydrin epoxy resin (col. 1, lines 21-27) suggested in Heidt et al. (col. 8, lines 28-30).

6. It would have been obvious to add the uncrosslinked Michael addition product of Heidt et al. as an additional crosslinker to the composition of Tominaga et al. in order to enhance the solvent resistance (Heidt et al., col. 12, Example 6 and Comparative Example C-1 to col. 13, line 15).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Moy et al. Patent Nos. 5,945,489 and 6,025,410 are drawn to uncrosslinked reaction products of multiacrylate acceptors acetoacetate donors that can be added to other resins (Moy et al. '489, col. 1, lines 10-12 and col. 2, lines 12-15). The claimed cycloaliphatic epoxide is not recited, nor is there any impetus to blend the reaction products of Moy et al. with a cycloaliphatic epoxide as the other resin.

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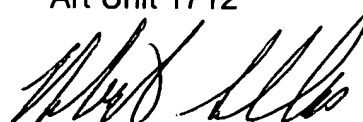
8. Dammann et al. Patent No. 6,706,414 (col. 2, lines 54-63) espouses an uncrosslinked Michael addition product of Michael donors and Michael acceptors prepared in the presence of an epoxy catalyst such as glycidyl methacrylate, trimethylolpropane triglycidyl ether and the diglycidyl ether of bisphenol A (col. 7, lines 8-11). There is no motivation to prepare the Michael addition product in the presence of a cycloaliphatic epoxide as a catalyst.

9. Cameron et al. Patent No. 6,576,297 (col. 2, lines 8-9, 44-48 and 56-60) report a cycloaliphatic epoxide combined with a curing agent of a Michael addition product of a primary amino-substituted heterocyclic secondary amine and an acetoacetate, beta-ketoester or beta-diketone compound. The claimed polyacrylate of the uncrosslinked Michael addition product is not recited.

10. European Patent No. 1,245,655 (page 2, line 53 to page 3, line 1 and page 6, lines 50-51) and Morimoto et al. Patent No. 5,565,525 (col. 2, lines 14-29 and col. 5, lines 53-56) describe a curing reaction between a poly(meth)acrylate, an activated methylene or methyne compound and a cycloaliphatic epoxide. The claimed uncrosslinked Michael addition product to be blended with a cycloaliphatic epoxide is not recited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Robert Sellers
Primary Examiner
Art Unit 1712



rs 7/1/2005